

ON THE BOTANY OF RYLSTONE AND THE
GOULBURN RIVER DISTRICTS. PART I.

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The area of the colony treated of in this paper comprises the eastern divisions of the Counties of Phillip and Roxburgh,—a portion of New South Wales, which I believe has not previously been explored botanically.

The northern boundary of this area is the Goulburn River, which rises on the eastern slope of the Dividing Range, a few miles south-west of the town of Ulan, and flows easterly in a tortuous course, eventually joining the Hunter River a little south of Denman. It runs mostly through precipitous and mountainous sandstone ridges, and consequently is subject to inundations,—flood-marks being found at a considerable height above its ordinary level. The country between the river and the Dividing Range consists principally of mountain ranges, with occasional patches of good soil, derived from the disintegration of basalt from the volcanic outcrops, approximating in area about 1000 sq. miles. It is sparsely populated, there being only about half a dozen small Public Schools scattered throughout this large area. Settlements are therefore few and far between, and consequently much of the indigenous flora remains, so that it is a splendid country for botanising.

The eastern boundary is formed by Widdin Brook, a stream which rises in Corricuddy Mountain and flows north into the Goulburn River, and the main Dividing Range as far south as Capertee.

The western boundary is the Barrigan Ranges and a line drawn from these south through the town of Cudgegong to Ilford.

The main Dividing Range divides the district into the eastern and western watersheds.

The western slopes of the Range are much more fertile, and as settlements are more frequently met with, it will be easily understood that the indigenous vegetation has been considerably cleared.

The geological formation of the Main Range is the Hawkesbury sandstone (Triassic), which extends in outcrops down to and over the Goulburn River. Interspersed with the sandstone are basalt and the Tomago Series, which extend inland to beyond Dubbo, a fact that may account for the occurrence on the eastern watershed of several western species.

The sandstone of the Range is succeeded on the western slopes towards the Cudgegong River by the Newcastle Series, and next we have the Upper Marine Series, followed by Silurian, with outcrops of granite, quartz porphyries, felsites and limestones.

I have not been able to obtain any authentic records of any trips made by previous botanical collectors, but judging by the references to localities in the "Flora Australiensis," I am under the impression that until visited by me this country was botanically a *terra incognita*. A. Cunningham must have been on the outskirts, for in the "Flora Australiensis" (Vol. i. p. 443) under *Cryptandra buxifolia*, Fenzl, the locality is given as "Rocky Hills on the meridian of Bathurst, on the parallel of 30° 50'; Mount Yongo, on the route to Hunter's River and Goulburn River, A. Cunningham." This naturalist collected on the north-west branches of the Hunter River; so that the Census now offered fills the gap between his collectings and those of others on the Blue Mountains.

Mr. A. G. Hamilton's Mudgee Census includes the flora of the country to the east of the southern half of this district.

My collections were made during the months of September, October, November and December, in the years 1895, 1893, 1892 and 1890 respectively, the actual collecting days being about 50.

Summarising the results of my expeditions, I find over 350 Species were collected representing 56 Natural Orders. Of these 10 were new species, and 7 have already been described, viz.:—

Acacia Muelleriana, J.H.M. et R.T.B.; *Helichrysum tessellatum*, J.H.M. et R.T.B.; *H. brevidecurrens*, J.H.M. et R.T.B.; *Daviesia recurvata*, J.H.M. et R.T.B.; *Isopogon Dawsoni*, R.T.B.; *Prostanthera discolor*, R.T.B.; *P. stricta*, R.T.B.

Three species new to the Colony were also found, viz.:—*Eucalyptus trachyphloia*, F.v.M., *Grevillea longistyla*, Hook., *Loranthus Birtwillii*, Benth. The range of other forms hitherto regarded as inland species, has been extended to the eastern watershed.

The following is a list of the Natural Orders, with the number of species collected:—

RANUNCULACEÆ... ..	1	COMPOSITE	... ..	32
DILLENIACEÆ	4	STYLIDÆ	... ..	1
VIOLARIÆ	1	GOODENIACEÆ	9	
PITOSPOREÆ	5	CAMPANULACEÆ... ..	3	
CARYOPHYLLÆ	1	EPACRIDÆ	14	
MALVACEÆ	4	JASMINEÆ	1	
STERCULIACEÆ	3	APOCYNÆ	1	
LINEÆ	1	ASCLEPIADEÆ	1	
GERANIACEÆ	2	LOGANEÆ	1	
RUTACEÆ	9	GENTIANÆ	2	
OLACINÆ	1	BORAGINÆ	2	
STACKHOUSIÆ	1	SOLANÆ	6	
RHAMNÆ	3	SCROPHULARINÆ	2	
SAPINDACEÆ	4	MYOPORINÆ	5	
LEGUMINOSÆ	58	LABIATÆ	8	
ROSACEÆ	3	MONIMIACEÆ	1	
SAXIFRAGEÆ	2	LAURINÆ	2	
DROSERACEÆ	1	PROTEACEÆ	27	
MYRTACEÆ	38	THYMELEÆ	4	
UMBELLIFERÆ	1	EUPHORBIACEÆ	5	
ARALIACEÆ	1	URTICACEÆ	1	
LORANTHACEÆ	4	CASUARINÆ	3	
RUBIACEÆ	5	SANTALACEÆ	7	

CONIFERÆ	...	...	2	JUNCCAEÆ	...	...	4
CYCADEÆ	...	...	1	CYPERACEÆ	...	...	5
ORCHIDEÆ	...	...	5	GRAMINEÆ	...	...	6
IRIDEÆ	...	...	1	LYCOPODIACEÆ	...	...	1
LILIACEÆ	...	...	6	FILICES	...	...	6

Excluding new species, the next most interesting finds were :—

(a) *Pomaderris philicifolia*, Lodd., a species only recorded from this Continent from the “banks of subalpine streams under the Australian Alps, descending into the plains of Gippsland on the Hume and Murray Rivers, *F.v.Mueller.*” It also occurs in Tasmania, and abundantly so in the northern island of New Zealand.

(b). *Eucalyptus trachyphloia*, F.v.M.

(c). *Loranthus Bidwillii*, Benth.

(d). *Grevillea longistyla*, Hook.

All these three species occur in Northern Queensland, and one would hardly have expected to have found them at Murrumbo, as they have never been collected in this Colony before.

I paid particular attention to the Acacias and have endeavoured to elucidate some of the difficulties surrounding the classification of the numerous species of this genus. Some points, I regret, still remain unsettled from want of perfect material; for instance, the occurrence in this Colony of *A. ixophylla* is still, I think, an open question; and the fruits obtained were not sufficiently mature for me to speak with any certainty, for as far as I was able to judge they differed entirely from those described by Bentham.

A. crassiuscula, Wendl., and *A. lunata*, Sieb., are also species I hope to deal with in a future paper, as the specimens collected were not altogether satisfactory.

To the Eucalypts I gave perhaps more attention than even the Acacias, as the late Dr. Woolls and Mr. A. G. Hamilton have

already described the Mudgee representatives of this genus, and I look on my notes as the connecting link between the Mudgee and Coast Floras. I was surprised to find *E. obliqua* so far north, as it has previously only been recorded from southern New South Wales, although it was recently found at the National Park by Mr. F. Williams. The shape of the fruit in the northern specimens differs entirely from the southern form, as will be observed in the notes under this species.

Other Stringybarks dispersed throughout the district are *E. eugenioides*, *E. macrorrhyncha*, and *E. capitellata*. Three species of Ironbarks were met with, but they were not plentiful. The most valued timber is perhaps "Slaty Gum," *E. polyanthema*, var.; *glauca*, var. nov.; and I consider it a distinct gain to the botany of the Colony to have the correct botanical sequence of this valuable tree made clear. *E. albens*, Miq., is a tree also valued for its durable timber. *E. globulus* occurring at Nulla Mountain is also worthy of note.

My list of grasses is poor, as most of my specimens were lost in transit.

I have followed Bentham and Hooker's classification.

I desire to tender my sincere thanks to Mr. J. Dawson, of Henbury, Rylstone, Surveyor for the District, for his invitations to, and hospitality in, his several camps, from which I was enabled to reach without any expense what would otherwise have been inaccessible country; and I must also mention his kindness in placing at my disposal men, horses, and buggies in order to make my collections complete. He himself is no mean collector, for I am indebted to him for some valuable botanical material and specimens.

I must also acknowledge my indebtedness to Mr. G. Harris, of Mount Vincent, near Ilford, for his kindness while staying at his homestead during my visit to the district in 1893, for it was from there I made my collections of the flora on the watershed of the Turon and Capertee Rivers.

Class I. DICOTYLEDONS.

Sub-class I. POLYPETALEÆ.

Series 1. Thalamifloræ.

RANUNCULACEÆ.

CLEMATIS ARISTATA, R. Br. Barrigan Ranges; only a few plants seen, not in flower.

C. GLYCINOIDES, DC. The most common Clematis in the district; September and October.*

C. MICROPHYLLA, DC. Murrumbo and Taloooby; September. I have placed my specimens provisionally under this species as they very closely resemble it in form of leaf, but differ in having anther appendages.

RANUNCULUS LAPPACEUS, Sm. Murrumbo; September (flower and fruit).

DILLENIACEÆ.

HIBBERTIA BILLARDIERI, F.v.M., var. OBOVATA, Benth. Murrumbo; October.

H. ACICULARIS, F.v.M. Only found on the barren sandy soil at the top of the Gulf Road; leaves very rigid and pungent-pointed, quite a distinct variety from the coast form; November.

H. DIFFUSA, R. Br., var. DILATATA, Benth. An exceedingly narrow leaved form of this variety is found over nearly the whole district; November.

*Throughout this paper, unless otherwise stated, references of this kind are used to denote the months in which the species were found to be flowering.

H. LINEARIS, R. Br., var. ? OBTUSIFOLIA, Benth. Murrumbo Gate, growing amongst the Ironbarks, *E. sideroxydon*. It seems to agree better with this doubtful variety of Bentham than any other described *Hibbertia*. I cannot bring myself to regard it as a variety of *H. linearis*, as an examination of the anthers shows it to have no affinity with the type of *H. linearis*, which has 15-20 stamens, while the Murrumbo specimens have from 60 to 70. If my specimens are this variety, then I think the specific name of *H. obtusifolia*, DC. (Syst. Veg. i. 429), should stand.

VIOLARIEÆ.

HYMENANTHERA DENTATA, R. Br. On the western watercourses of the main Dividing Range at Carwell, near Rylstone, and on the eastern watershed on the banks of the Goulburn River, near Murrumbo; September.

PITTOSPOREÆ.

PITTOSPORUM PHILLYREOIDES, DC. Near the summit of Range on the right bank of Bylong Creek, near Bylong; September. Never before recorded so far east, being strictly a dry country plant.

BURSARIA SPINOSA, Cav. All over the district and in some localities a perfect pest. At the foot of the Barrigan Ranges is a variety with very long leaves (2"), and almost spineless.

MARIANTHUS PROCUMBENS, Benth. Rare; October.

CITRIOBATUS MULTIFLORUS, A. Cunn. Barrigan Ranges.

CHEIRANTHUS LINEARIS, A. Cunn. Near Rylstone; rare; December.

CARYOPHYLLEÆ.

STELLARIA PUNGENS, Brongn. Exceedingly common on sandstone ridges. Mt. Vincent; November.

MALVACEÆ.

SIDA CORRUGATA, Lindl., var. *ORBICULARIS*, Benth. Not common; only one plant seen, and that at Murrumbo. This is considered an inland species, with the exception of a specimen obtained at Broadland, on the Hawkesbury River, by Robert Brown; and its presence now on the Goulburn supplies the connecting link with the dry country varieties; October (flower and fruit).

ABUTILON TUBULOSUM, Hook. Bylong; the most southern locality recorded; September.

HIBISCUS STURTHII, Hook. Rare; October (flower and fruit).

STERCULIACEÆ.

STERCULIA DIVERSIFOLIA, G. Don. "Kurrajong." On most of the ridges in the district; November and December. These trees are never cut down, as the foliage is eaten by stock during times of drought. A peculiar fact in connection with this species was related to me by Mr. J. Dawson, surveyor for the district. He states that when a living tree of any other species is blazed and marked the sapwood and bark eventually grow over the marks, and after a few years no trace of the cicatrices can be seen on the tree, but if the bark and alburnum be removed then the whole lettering, &c., is almost as clear as on the day it was originally cut. I have seen marks after 6 inches of the outer growth had been removed as plain and distinct as when chiselled 36 years previously. With the "Kurrajong" (*S. diversifolia*) the survey mark is never covered by the alburnum or bark, and always remains on the surface to whatever size the tree may increase in girth.

RULINGIA RUGOSA, Steetz. Murrumbo; the most easterly habitat recorded; October.

R. PANNOSA, R. Br. Goulburn River.

Series II. *Discifloræ*.

LINEÆ.

LINUM MARGINALE, A. Cunn. Goulburn River; September.

GERANIACEÆ.

GERANIUM DISSECTUM, Linn. Talooby and Murrumbo; October.

ERODIUM CYGNORUM, Nees. Murrumbo; in fruit in October.

RUTACEÆ.

ZIERIA ASPALATHOIDES, A. Cunn. Murrumbo; October. The two previous recorded localities for this Colony are Wellington and Hunter River.

Z. CYTISOIDES, Sm. Mt. Vincent and Rylstone; October and November.

BORONIA ? MOLLIS, A. Cunn. Bylong; the most northerly record if these specimens are those of *B. mollis*; November.

B. ANEMONIFOLIA, A. Cunn., var. ANETHIFOLIA, Benth. Murrumbo; not common; September.

PHEBALIUM DIOSMEUM, A. Juss. Goulburn River; October and November.

P. GLANDULOSUM, Hook. Only found at one spot, at the foot of Cox's Gap (Murrumbo side). I have my doubts about placing the specimens under this species, but do so as they come nearer it than any other N.S. Wales species. It resembles the Western Australian *P. tuberculosum* in the leaves being channelled above and the margins scarcely, or not at all, recurved, and the flowers are in sessile umbels exceeding the last leaves; a showy shrub; height about 10 feet; September and October. Since writing the above, Mr. Dawson has found it at Kerrarie. Flowers on filiform pedicels.

P. squamulosum, Benth. Common on all the sandstone ranges from Rylstone to Goulburn River; and it is perhaps the most conspicuous shrub in the month of September, when it is in full flower. Height from 12-20 feet, the coast representative rarely exceeding a dozen feet.

PHILOTHECA AUSTRALIS, Rudge. On sandstone ridges. Most of the specimens incline to Sieber's *P. Reichenbachiana*, but as the leaf varies in nearly every plant, I have placed them all under Rudge's species as suggested by Baron von Mueller; September to November. Petals white or pink, as distinct from the mauve colour of the coast plants.

OLACINEÆ.

OLAX STRICTA, R. Br. Murrumbo; October (flower and fruit).

STACKHOUSIÆ.

STACKHOUSIA MONOGYNA, Labill. On moist damp flats; September and October.

RHAMNEÆ.

ALPHITONIA EXCELSA, Reissek. "Red Ash;" under the crown of the high rocks on the banks of the Goulburn River (Macdonald's Flat), Murrumbo; only small trees seen; in early fruit; bark white and smooth.

POMADERRIS LANIGERA, Sims. Kelgoola and Barrigan Ranges; Bylong; September.

P. PHYLICIFOLIA, Lodd. Only found at one spot, viz., about two miles from the foot of Cox's Gap, Murrumbo side, on the banks of a creek, and only one shrub seen, and that about 5 feet high. I first collected it in bud in October, 1893, and again visited the same tree in September, 1895, but was unfortunate in again finding it only in bud,—owing no doubt to the severe drought from which the whole Colony was suffering at that time.

I look on this specimen as a particularly interesting find from the fact that it has only previously been recorded from this Continent from the "banks of subalpine streams under the Australian Alps," so that now this new locality brings its range very much farther north. It occurs abundantly in the northern island of New Zealand, and also in Tasmania. I have compared this northern form with New Zealand and subalpine specimens, and it differs little from them. It has fewer leaf scars on the stems, and less numerous leaves; its height is also a little greater.

- P. *BETULINA*, A. Cunn. Mount Vincent, near Ilford; November.

SAPINDACEÆ.

DODONÆA TRIQUETRA, Wendl. Bylong, Murrumbo; in fruit in September.

- D. *ATTENUATA*, A. Cunn. Mount Vincent, near Ilford; November.

D. *CUNEATA*, Rudge. Murrumbo; in fruit in October. Rylstone; in fruit in December.

- D. *PINNATA*, Sm. Barrigan Ranges; September.

Series III. *Calycifloræ*.

LEGUMINOSÆ.

OXYLOBIUM TRILOBATUM, Benth. Murrumbo; on sandflats near Goulburn River, and Kelgoola.

MIRBELIA GRANDIFLORA, Ait. Kelgoola; September.

GOMPHOLOBIUM UNCINATUM, A. Cunn. Bylong Ranges; November. The pedicels are longer and the flowers larger than those described by Bentham (*Fl. Aust. ii.* 46), but I do not think it can be referred to any other species.

- G. *HUEGELII*, Benth. A few miles west of Rylstone; October.

DAVIESIA CORYMBOSA, Sm., var. LINEARIS, Lodd. A very narrow leaved form found at Talooby; October.

D. LATIFOLIA, R. Br. Mount Vincent, near Ilford and Talooby. It is called "Native Hops" on account of the bitter principle contained in its leaves. In full flower in October, and in fruit in November and December.

D. GENISTIFOLIA, A. Cunn. Only seen in one locality, viz., Murrumbo; September and October; mostly on grassy levels.

var. COLLETIODES, Benth. Kelgoola; source of the Cudgegong River.

D. RECURVATA, J.H.M. et R.T.B. Bylong; November.

PULTENÆA SCABRA, R. Br., var. MONTANA, Benth. Camboon and Talooby; October.

P. SCABRA, R. Br., var. MICROPHYLLA, var. nov. Bylong; November. As my specimens possess smaller leaves than any described specimens, and are much shorter (about 2") than the type, I propose to designate it a new variety.

P. MICROPHYLLA, Sieb. Portland and Camboon; October.

P. TERNATA, F.V.M. Only found in one spot, on the Range west of Murrumbo Plains; September to December.

DILLWYNIA FLORIBUNDA, Sm., var. SERICEA, Benth. Murrumbo and Talooby; October.

D. ERICIFOLIA, Sm., var. PHYLICOIDES, Benth. Common on sandstone ridges.

BOSSLEA MICROPHYLLA, Sm. Rylstone and Camboon; October.

B. BUXIFOLIA, A. Cunn. Camboon; October.

TEMPLETONIA MUELLERI, Benth. Murrumbo; September.

HOVEA LINEARIS, R. Br. Murrumbo; September (flower and fruit).

- H. HETEROPHYLLA, A. Cunn. Kelgoola; in flower in September : at Taloo by in fruit in October.
- H. LONGIFOLIA, R. Br., var. LANCEOLATA, Benth. Found throughout the whole district under shelving rocks; flowers blue, not showy; in flower in September, and in fruit in December.
- H. LONGIFOLIA, R. Br., var. PANNOSA, Benth. Murrumbo and Mount Vincent; September. This is a very marked variety compared with the previous one, the leaves being smaller and the petioles shorter; tomentum on the underside of the leaves, branches and petiole, dense, woolly, and rusty-coloured.
- LOTUS AUSTRALIS, Andr. Camboon, Bylong, and Murrumbo; November.
- SWAINSONIA MICROPHYLLA, A. Gray. Bylong; September.
- S. GALEGIFOLIA, R. Br. Throughout the district; in flower and fruit in November; eaten by cattle.
- GLYCINE CLANDESTINA, Wendl. Taloo by; October.
- DESMODIUM VARIANS, Endl. Bylong; October to November.
- GLYCINE TABACINA, Benth. Murrumbo; in fruit in October.
- KENNEDYA MONOPHYLLA, Benth. Murrumbo; October (flower and fruit); fairly common; Cox's Gap, with leaves large and stipules persistent.
- *MEDICAGO DENTICULATA, Willd. Murrumbo; in fruit in October.
- CASSIA EREMOPHILA, A. Cunn. In flower at Bylong in September; Murrumbo; in fruit in October.
- C. AUSTRALIS, Sims. Not common; Bylong and Murrumbo; October to December.

* Introduced.

ACACIA LANIGERA, A. Cunn. Henbury and Rylstone; in flower in September and in fruit in December. The first authentic pods of this species were obtained from this locality (P.L.S.N.S.W. 2nd Ser. Vol. x.)

A. JUNIPERINA, Willd. Murrumbo, Road to Goulburn River; September.

var. BROWNI, Benth. Barrigan Ranges.

A. ARMATA, R. Br. Cox's Gap, Murrumbo; September.

A. VOMERIFORMIS, A. Cunn. Rare; Kelgoola; September. In the specimens collected there is a peculiar recurved point or hook instead of the gland usually found on the phyllodia of this species.

A. UNDULIFOLIA, A. Cunn.; var. SERTIFORMIS, Benth.; and var. DYSOPHYLLA, Benth. Both forms are met with over the whole district on sandstone ridges; var. *sertiiformis* is most abundant in the Capertee Valley, but is found interspersed with var. *dysophylla* at Camboon, Bylong, and Murrumbo.

A. VERNICIFLUA, A. Cunn. Between Rylstone and Mount Vincent; September.

A. PENNINERVIS, Sieb. This giant *Acacia* is found throughout the whole district, on both sides of the Dividing Range. It is known as "Blackwattle," and its bark is valued for its tannin properties. At the head of the Capertee Valley some trees attain a height of from 50 to 70 feet or more. It is not recorded for Mudgee in Mr. A. G. Hamilton's Census, although it occurs plentifully not very far east of that town.

Of all the wattles known to me I think I can justly assign the first place to this one for possessing the most numerous varietal forms.

Bentham only gives one variety, viz., *falciformis*, under which he includes *A. falciformis*, DC., and *A. astringens*, A. Cunn.

At least three distinct forms are to be found in this district, viz. :—

1. Var. *normalis*.—Phyllodia lanceolate-falcate, obtuse or acuminate, thinly coriaceous, 3 to 5 inches long and 1 inch broad, 1-nerved and prominently penninerved, the margins nerve-like, and almost always with a short secondary nerve terminating in a gland a short distance from the base. Pod several inches long and lin. broad, firm, margins parallel, often glaucous. A tree, up to 60 or 70 feet high. It is the bark of this tree that is highly prized for tanning.

2. Var. *lanceolata*.—A tall shrub: branchlets thin, angular, phyllodia uniformly lanceolate, narrowed at both ends, secondary nerve very indistinct; always narrower than in var. 1. Pod much lighter in colour than any of the other forms, about $\frac{1}{2}$ in. broad and 6 to 9 in. long.

3. Var. *glauca*.—A shrub of a few feet in height, branchlets red, terete, much stouter than in other varieties. Phyllodes broadly obtuse, glaucous, coriaceous, central nerve and margins very prominent, the gland rarely present, 3 to 5 inches long, 1 to 2 inches broad. Pod thickly coriaceous, 2 to 4 inches long, under one inch broad. Seed mostly orbicular.

(Mr. E. Dawson collected the whole series of pods and flowers upon which these remarks are based.)

A. NERIIFOLIA, A. Cunn. Taloo by and $\frac{1}{2}$ Murrumbo, on sandstone ridges. Appears to have no local name. At Murrumbo Gate there are a few fair-sized trees, measuring 18 inches in diameter and 20-30 feet in height; September.

A. GLADIIFORMIS, A. Cunn. Rylstone; September.

A. HAKEOIDES, A. Cunn. Taloo by; the nearest locality to the coast yet recorded for this dry country species; September.

- A. *SUBULATA*, Bonpl. Quite local; only found at Murrumbo Gate, growing amongst Ironbarks, *E. sideroxylon*. A tall, graceful shrub, with long pendulent green branches. September and October. The first recorded pods of this species were obtained from this locality (P.L.S N.S.W. 2nd Ser. Vol. viii.)
- A. ?*CRASSIUSCULA*, Wendl. A common wattle throughout the district; flowers in October and September and fruits in December. I have preceded the name with a query as I have never seen an authenticated *A. crassiuscula*; but as I am acquainted with almost every other species of *Acacia* found in New South Wales I cannot place my specimens under any other than this one. The fruit does not agree with Bentham's description, but perhaps his were wrongly matched. It attains almost the size of a young tree.
- A. *NEGLECTA*, J.H.M. et R.T.B. Perhaps the most common of all the *Acacias* found on the sandstone ridges and ranges. This is considered by some as *A. lunata*, but the pods are entirely different from those described by Bentham (B. Fl. Vol. ii. p. 373).
- A. *HOMALOPHYLLA*, A. Cunn. "Yarran." Talooby; never recorded so far east before.
- A. *IXIOPHYLLA*, Benth. I have obtained only young pods of this plant, so cannot speak with certainty as to its identity; and yet if it is not this species I do not know what other it can be, as its phyllodes are the most viscid of all the *Acacias* known to me. It is by far the most common wattle throughout the district of Bylong, growing under the hills in dense, almost impenetrable masses, and is in fact quite a pest. It attains a height of about 15 feet; September and October.
- A. ? sp.nov. Rylstone; September. This I regard as a new species, but have not been able to obtain the pods. It

is a low shrub of a few feet, with long linear plurinerved phyllodes and short axillary racemes, with very few flowers in the head.

A. MELANOXYLON, R. Br. Only small trees seen; foot of Barrigan Ranges, Mt. Vincent and Kelgoola. The timber is not valued; August.

A. IMPLEXA, Benth. Barrigan Ranges; in early fruit.

A. LONGIFOLIA, Willd. (a). Var. *Bylongensis*, var. nov. This is quite a distinct variety from any described by Benth (B. Fl. ii. 398). The length of the phyllode has already been recorded (P.L.S.N.S.W. 2nd Ser. Vol. viii. p. 311). The racemes are shorter and more compact than the type and other known varieties, resembling in some respects those of *A. doratoxylon*; in fact it might be looked upon as an intermediate form between these two species. Gulf Road and Camboon.

(b). Var. TYPICA, Benth. This variety is found on the Barrigan Ranges.

A. DORATOXYLON, A. Cunn. "Hickory." At Murrumbo, on the ranges on the right bank of the Goulburn River. It also probably extends to the Hunter River, as a specimen of "Hickory" timber from that locality, which I have compared with the Murrumbo "Hickory," is exactly identical. I consider the finding of this species here of some importance, as it has only previously been recorded in this Colony from the interior, as the "Spearwood of certain tribes." Height generally from 15-30 feet; diameter up to 1 foot; in flower in September and in fruit in November and December.

A. CUNNINGHAMII, Hook., and also var. LONGISPICATA, Benth. Cox's Gap; September. I am indebted to Mr. J. Dawson for the pods of this *Acacia*. They hardly agree with any previous descriptions. Benth had only unripe pods as he mentions (B. Fl. ii. p. 407), and

from the pods now in my possession I am inclined to think his were not properly matched. Mr. Dawson's specimens of fruit are attached to twigs, with the phyllodes, and stout, strongly 3-angled stems and early flowers, so that there can be no doubt about their identity. They are not "long . . . very flexuose or twisted," but are straight or slightly curved, 2-3 inches long, under 2" broad, valves *thin*, convex over the seed. Seeds small, oblong, longitudinal, funicle at first straight and filiform, and gradually thickening into 3 or 4 folds under the seed.

- A. DISCOLOR, Willd. Kelgoola; September; rare.
- A. DEALBATA, Link. Occurs throughout the district from Rylstone to the head of the Cudgegong; September. Its bark is never used as a tan, the inhabitants having found out the superior tanning properties of the black wattle (*Acacia penninervis*, Sieb.). An interesting feature of this *Acacia* here, is that the plants on the ridges have short leaflets, 2-3" long, and the whole tree is glaucous, whilst the plants growing on the plains and in gullies have linear leaflets, 4 to 6 lines long, and glabrous; and the tree could very easily be mistaken for *A. decurrens*, var. *normalis*, but for the pods.
- A. MUELLERIANA, J.H.M. et R.T.B. Foot of Murrumbo Ranges and Road to Cox's Gap, Murrumbo; in flower in August, in fruit in December.

ROSACEÆ.

- RUBUS PARVIFOLIUS, Linn. Murrumbo, and on the banks of a creek at Kelgoola.
- ACÆNA OVINA, A. Cunn. Kelgoola. Only a few specimens seen.

SAXIFRAGÆÆ.

- CERATOPETALUM APETALUM, D. Don. In the gullies at the head of the Cudgegong River. Vernacular name "White-wood;" timber used for lining boards of houses.

SCHIZOMERIA OVATA, D. Don. Gullies at the source of the Cudgegong River.

DROSERACEÆ.

DROSERA PELTATA, Sm. Camboon.

MYRTACEÆ.

CALYTHRIX TETRAGONA, Labill. Camboon and Murrumbo; in flower and fruit from September to December.

BECKEA CUNNINGHAMII, Benth. Found on the eastern and western slopes of the Dividing Range at Murrumbo toward the Goulburn River and Camboon, respectively. This is the first time it has been recorded on the eastern watershed; October.

LEPTOSPERMUM FLAVESCENS, Sm., var. GRANDIFLORUM, Benth. Bylong; November.

L. SCOPARIUM, R. & G. Forst. Sandy flats towards the Goulburn River; in fruit in September.

L. ARACHINOIDEUM, Sm. Camboon; in fruit in October.

L. LANIGERUM, Sm. Camboon; in fruit in October. I am not altogether certain about my determination in this case, as I failed to gather the flowers. The leaves are almost pungent-pointed and the fruits large. It is probably Bentham's variety (*d*) of this species.

L. PARVIFOLIUM, Sm. Camboon and Murrumbo; September and October. The Murrumbo specimens are characterised by an almost glabrous calyx, with triangular persistent lobes.

CALLISTEMON SALIGNUS, DC., var. ANGUSTIFOLIA, Benth. Murrumbo; October. I also collected a large-leaved variety at the same place.

ANGOPHORA INTERMEDIA, DC. Found mostly on the alluvial flats; very abundant at Bylong; February. This is a good fodder tree in time of drought. It is also an excellent shade tree for cattle. The timber is of very little value, but works up well in small cabinet work.

EUCALYPTUS STELLULATA, Sieb. On the hills overlooking the Capertee Valley. Small trees with lead-coloured bark.

E. AMYGDALINA, Labill. Known locally as "Peppermint;" rare; only one tree seen, at Kelgoola on the Cudgegong River; in bud and mature fruit in September.

E. OBLIQUA, L'Her. "Stringybark." Gulf Road. This species has never been found so far north before. The fruits differ from those figured as *E. obliqua* in Hooker's "Flora of Tasmania" (i. 136, t. 28), and also from the delineation in Baron von Mueller's "Eucalyptographia." In both instances the fruits are shown with a contracted, countersunk rim, but in my specimens *the fruits are hemispherical, with a flat, broad truncate rim.* The shape of the leaves corresponds in every particular with all the descriptions and figures published of *E. obliqua*.

A microscopical examination of the anthers showed them also to agree with Bentham's description (B. Fl. iii. p. 204).

This form of *E. obliqua* is evidently peculiar to New South Wales, as it has also been found near the National Park (F. Williams).

This species probably occurs also at Mudgee, although not collected by Hamilton (P.L.S.N.S.W. 2nd Ser. Vol. ii. p. 279).

E. CAPITELLATA, Sm. Found throughout the whole district in both basaltic and sandstone country. From Rylstone to the Goulburn River it goes by the name of "White Stringybark," the same as *E. eugenioides*; in fact, the settlers look upon them as one and the same species, but on the watershed between the Capertee and Turon Rivers it is called "Silvertop" and "Messmate,"—rather unfortunate terms and not mentioned here to be perpetuated, but only as a warning, as it is now generally decided by botanists to reserve those terms for *E. amygdalina*.

The large-fruited form, the same as that found on "North Shore, *Woolfs*" (B. Fl. iii. 206) predominates. The smaller-fruited forms are occasionally met with, and as *E. eugenioides* is also to be recorded from here, I should like to venture the opinion that this latter species should be merged into *E. capitellata* or *vice versa*, and the two regarded as extreme forms of the same species. Bentham places *E. eugenioides*, Sieb., as a variety of *E. piperita*, but there appears to me very little connection except in the matter of bark.

The type fruits of this species resemble the fruits of *E. eugenioides* in every particular except size, and the smaller varieties cannot be distinguished from those of *E. eugenioides*; in fact, they are the *E. eugenioides* of some authors.

- E. MACRORRHYNCHA, F.V.M. "Red Stringybark." This is considered the best stringybark in regard to durability of timber, and is highly prized. It occurs only on the western slopes of the ranges; November and December.
- E. PIPERITA, Sm. "Blackbutt." Mount Vincent, near Ilford.
- E. SIDEROXYLON, A. Cunn., var. PALENS, Benth. "Ironbark." This variety previously had been recorded only from one locality, New England (C. Stuart). Its southern extension must now be brought to the Murrumbidgee Plains, where it is the only Ironbark. The buds are smaller than the typical Liverpool and Parramatta specimens of *E. sideroxylon*, and very much resemble those of *E. paniculata*. The blue glaucous leaves contrasting with the black bark give certain patches of bush a very pretty appearance. The timber is not considered of any value. Flowers profusely from September to December.
- E. MELLIODORA, A. Cunn. "Yellowbox." Throughout the district, mostly on flats. Timber very durable, but difficult to obtain in any size, as most of the trees have a tendency to barrel in the trunks.

As A. Cunningham, C. Moore, and F. v. Mueller each record a different bark (B. Fl. iii. 210), I may mention here that in all instances I found the bark "furrowed and persistent," and its inner surface, when freshly cut from the tree, has a very yellowish appearance as well as the exposed sapwood, hence its local name.

- E. *HEMASTOMA*, Sm., var. *MICRANTHA*. "Brittle Gum." Camboon, on the western slope of the Range, and Mount Vincent, near Ilford.
- E. *POLYANTHEMA*, Schau. "Red Box," "Slaty Gum." There are three distinct varieties of this species to be found in the district.

(a). In the neighbourhood of Rylstone it goes by the name of "Red Box," and the timber is considered of no value whatever. The trees are of no great height, have a dirty scaly bark at the butt but smooth otherwise, and are found on poor sandstone country. The leaves are uniformly oval, on fairly long petioles, veins oblique, marginal one removed from the edge, under three inches long, and glaucous on both sides; flowers small; in flower in December; fruit turbinate, under two lines long in diameter.

(b). At Camboon, 7 miles north of Rylstone, there is a variety with smooth bark, long lanceolate leaves green on both sides, the veins oblique, the marginal one *close* to the edge; the petiole long, sometimes twisted; flowers larger than in previous variety, outer stamens sterile; fruits turbinate, 3 lines in diameter, rim thin and notched and similar to the coast *E. polyanthema*; flowers in October; timber good.

(c). On the eastern slope of the Dividing Range and extending to the Goulburn River there is to me the most important variety known as "Slaty Gum." The trees are large, with very straight barrels, and the timber is

highly valued and considered equal to if not superior to Ironbark. The bark is smooth, with a silvery sheen. The leaves differ from those of the two other varieties in being much narrower and glaucous, the venation being the same as in the Camboon variety. The flowers are the smallest of the three varieties, the stamens are all fertile as in the first variety, the fruits glaucous, 1 line in diameter.

I was at first inclined to consider these as three distinct species (being so looked upon by the residents), but a microscopical examination of the anthers proved them identical. The anthers are cylindrical, "truncated, opening by terminal pores" in each variety, and as faithfully figured by Baron von Mueller in his "Eucalyptographia." There is evidently an error in Bentham's description of the anthers (B. Fl. iii. 214).

In closing these remarks I would like to point out that the New South Wales *E. polyanthema* differs considerably in the character of its bark from the Victorian form, which has "an ashy-grey, persistent, rough and furrowed bark" (F.v.M., B. Fl. iii. 213), while all the trees seen by me, and I have collected from the coast to the western slope of the Dividing Range, are smooth-barked. The leaves of the Sydney *E. polyanthema* are much larger and more ovate than any of the three varieties above enumerated.

E. HEMIPHLOIA, F.V.M. "Box." Throughout the district on the flats. It is not by any means the fine upstanding tree growing on the coast near Parramatta.

It was found in flower at Bylong and Murrumbo in October. Mr. A. G. Hamilton gives the flowering time at Mudgee, 40 miles east, as April and May,—an evidence of the uncertain times of flowering of Eucalypts.

I have kept this species apart from the following, as I consider them quite distinct when the following

differences are taken into account, namely :—size, shape, and venation of leaves; size of flowers and fruits ; and shape of anthers, which in this case resemble those of “Slaty Gum.”

- E. ALBENS, Miq. (*E. HEMIPHLOIA*, var. ALBENS, F.V.M.) “Box;” “White Box.” Bentham considered this “a very distinct species” (B. Fl. iii. p. 219), but Baron von Mueller has placed it as a variety of *E. hemiphloia*. When seen growing in juxtaposition with *E. hemiphloia* its characteristic differences are very marked. According to Baron von Mueller it has a dull green, persistent bark, but I have always found it with a whitish, persistent chequered bark, somewhat approaching *E. hemiphloia*, from which it also differs in the larger, angular, sessile calyx (nearly 9" long), larger fruits, and in “the foliage being usually glaucous or almost nearly white.” Anthers globular, opening at the side by almost circular pores, connective much developed.

The timbers of the two species are of equal merit. It is always found growing under the Ranges on both banks of Bylong Creek, and gradually ascending them till meeting the “Slaty Gum,” *E. polyanthema*; September and October.

- E. SIDEROPHLOIA, Benth. “Ironbark.” On the sandstone ranges at Murrumbo, and only represented by poor specimens of this grand forest monarch of the coast, in fruit and bud in September.
- E. CREBRA, F.V.M. Found throughout the district as the most common of all the “Ironbarks,” and the only one valued for its timber, the others never appearing to grow to any size. Shingles that had lain on the ground exposed to the weather for over five years, were as good as when first split. None of the Ironbarks are considered equal in durability to “Slaty Gum” timber.

Splendid forests of this grand timber are being ring-barked by the selectors. The flowers are very much sought after by bees, and are their standby during times of drought when other flowers are scarce; September.

- E. GLOBULUS, Labill. A small-fruited variety occurs at Nulla Mountain, 24 miles east of Rylstone.
- E. DEALBATA, A. Cunn. "Sallow." I am not at all certain that my diagnosis in this instance is correct, but I place the specimen collected at Ganguddy Creek, 18 miles east of Rylstone, provisionally under this species.
- E. VIMINALIS, Labill. Found throughout the district on low levels; known under several vernacular names such as "White Gum," "Swamp Gum," "River Gum," "Brittle Gum;" timber not used.
- E. TERICORNIS, Sm. "Red Swamp Gum;" "Red Gum." Throughout the district on flats. A profuse flowerer during October, November and December. It is the common form with a long operculum. I am inclined to place this and the preceding species under one name.
- E. STUARTIANA, F.v.M. "Woolly Butt." At Mount Vincent, near Ilford, and Ganguddy Creek; timber worthless.
- E. PUNCTATA, DC. Kelgoola, at the source of the Currajong River. The dark copper-coloured foliage of this tree makes it very conspicuous amongst other Eucalypts of the bush in this locality, where it goes by the local name of "Ironwood." At Mount Vincent, near Ilford, it is known as "Red Gum."
- E. GUNNII, Hook. f. Occurs on both sides of the Dividing Range. Known as "Mountain Gum" at Kelgoola, but has no vernacular name at Murrumbo.
- E. TRACHYPHLOIA, F.v.M. Only found at two places, Cox's Gap and Murrumbo Gate. It has not been recorded from any other locality in this Colony, and is known only

from the Burnett River, Queensland ("Bloodwood"). Kino exudes very freely. Timber hard, colour of Spotted Gum; not used. In fruit in September and October.

E. EUGENIOIDES, Sieb. "White Stringybark." Found on the watershed between Capertee and Turon Rivers, and also on the Barrigan Ranges, probably throughout the whole district. (See remarks under *E. capitellata*.)

EUGENIA SMITHII, Poir. Occurs plentifully in the gullies at the extreme head of the River Cudgegong, and known as "Lilly Pilly."

UMBELLIFERÆ.

ERYNGIUM ROSTRATUM, Cav. Rylstone; in fruit in December.

ARALIACEÆ.

ASTROTRICHA LEDIFOLIA, DC. The narrow-leaved variety was found at Camboon, in flower in October; and the broader leaved form with narrower panicles at Bylong.

Sub-class II. MONOPETALÆ.

LORANTHACEÆ.

LORANTHUS BIDWILLII, Benth. Only at one locality, Cox's Gap; on *Callitris* sp. Previously recorded only from Wide Bay, Queensland.

L. CELASTROIDES, Sieb. Rylstone; in fruit in December.

L. PENDULUS, Sieb. A long-leaved variety, the leaves measuring sometimes over a foot. Mount Vincent and Camboon; in flower in November and in fruit in October.

NOTOTHIXOS CORNIFOLIUS, Oliv. Bylong. On *Sterculia diversifolia*, G. Don; September and October.

RUBIACEÆ.

CANTHIUM OLEIFOLIUM, Hook. Collected when in flower at Karrabee, by Mr. J. Dawson, L.S., and by me near the Goulburn River, Murrumbo, but not in flower or fruit. Previously recorded only from the interior of the Colony.

- COPROSMA HIRTELLA*, Labill. Mount Vincent, near Ilford; November.
- POMAX UMBELLATA*, Soland. Camboon; October.
- ASPERULA CONFERTA*, Hook. Camboon; October.
- GALIUM GAUDICHAUDI*, G. Don. Camboon. October.

COMPOSITE.

- OLEARIA RAMULOSA*, Benth., var. *COMMUNIS*, Benth. The common New England form, "with glabrous glandular achenes."
- VITTADINIA AUSTRALIS*, A. Rich. Camboon; October.
- V. AUSTRALIS*, A. Rich., var. *DISSECTA*, Benth. Murrumbo; October.
- BACHYCOME STURTII*, Benth. Camboon; October.
- B. GRAMINEA*, F.v.M. Talooby, Murrumbo; October.
- B. LINEARIFOLIA*, DC. Camboon; October.
- B. MULTIFIDA*, DC. Murrumbo; October.
- SIEGESBECKIA ORIENTALIS*, Linn. Murrumbó; October.
- ECLIPTA PLATYGLOSSA*, F.v.M. Bylong; November.
- CRASPEDIA RICHEA*, Cass. Murrumbo; October.
- CASSINIA?* *LEPTOCEPHALA*, F.v.M. In bud in November.
- IXIOLENA LEPTOLEPIS*, Benth. Murrumbo; the most easterly locality recorded; generally regarded as an interior species; September.
- PODOLEPIS ACUMINATA*, R. Br. Camboon; bracts very acuminate in my specimens; October.
- LEPTORRHYNCHOS SQUAMATUS*, Less. Talooby; October.
- HELICHRYSUM SCORPIOIDES*, Labill. Common; some specimens measure 2 feet in height; October.
- H. BRACTEATUM*, Willd. A tall perennial of 2 feet, with long linear leaves; Murrumbo; October.

- H. APICULATUM, DC. Throughout the district; September to December.
- H. SEMIPAPPOSUM, DC., and var. BREVIFOLIUM, Sond. De Candolle considered this variety as a distinct species (*H. microlepis*, Prod. vi. 195). I was at first inclined to agree with his view, but I have since found it growing from the root or base of the stem of the typical form, thus proving what Bentham suspected (B. Fl. iii. 625), that there is only one species. The two forms on the same stem make a unique herbarium specimen.
- H. DIOSMIFOLIUM, Less. Throughout the district; October to December. Quite like the Sydney form.
- H. BREVIDECURRENS, J.H.M. et R.T.B. Murrumbo; October.
- H. TESSELATUM, J.H.M. et R.T.B. Murrumbo, and the hill overlooking Bylong on the east of Torrie Lodge.
- H. CUNNINGHAMII, Benth. Barrigan Ranges, Bylong; September. I have placed my specimens under this species, although they differ from Bentham's description in having leaves over 1 inch long ($\frac{1}{2}$ " Benth.) and 3 to 6 florets (3 Benth.)
- HELIPTERUM ANTHEMOIDES, DC. Murrumbo; November.
- H. INCANUM, DC. Common everywhere; October to December.
- H. DIMORPHOLEPIS, Benth. Fairly common in places at Murrumbo and Camboon; September.
- GNAPHALIUM LUTEO-ALBUM, Linn. Murrumbo; October.
- ERECHTITES ARGUTA, DC., var. DISSECTA, Benth. Camboon; October.
- Also a variety which is not "scabrous, with crisped hairs," and is without toothed auricles; flower heads not dense.
- E. QUADRIDENTATA, DC. Camboon; October.

SENECIO LAUTUS, Sol. Murrumbo, Talooby and Mt. Vincent; October.

S. VELLEIOIDES, A. Cunn. Talooby, Bylong Creek; October.

CYMBONOTUS LAWSONIANUS, Gaud. Camboon; October.

MICROSERIS FORSTERI, Hook. Not very common; only found at Murrumbo; September.

STYLIDEEÆ.

STYLIDIUM LARICIFOLIUM, Rich. Camboon.

GOODENIACEÆ.

GOODENIA BARBATA, R. Br. An undershrub; on the eastern and western slopes of the Dividing Range at Camboon and Bylong respectively. This is its most northern locality; October and November.

G. DECURRENS, R. Br. Bylong Ranges; November.

G. OVATA, Sm. Bylong, under the shelter of rocks, mostly in moist situations; November. These specimens are *G. acuminata*, R. Br., placed under the above species by Bentham. The leaves are uniformly broadly lanceolate, denticulate, 1-1½ inches long, non-viscid and hoary on both sides.

G. HETEROPHYLLA, Sm. Camboon; October.

G. PINNATIFIDA, Schlecht. Murrumbo; October and September.

G. PANICULATA, Sm. Murrumbo; October.

SCÆVOLA MICROCARPA, Cav. Bylong Ranges; November.

DAMPIERA BROWNII, F.v.M. Cox's Gap; September and November.

D. ADPRESSA, A. Cunn. Murrumbo; the most easterly recorded locality; October.

CAMPANULACEÆ.

ISOTOMA AXILLARIS, Lindl. Bylong Ranges; November.

I. FLUVIATILIS, F.v.M. Bylong; November.

WAHLENBERGIA GRACILIS, A.DC. Everywhere; November.

EPACRIDÆ.

STYPHELIA LETA, R.Br., var. ANGUSTIFOLIA, Benth. At Bylong and Murrumbo on the sandy flats and sandstone ridges. Bentham (B. Fl. iv. p. 147) queries the colour of the flowers, but in every instance I found them red. I have never found this variety near Sydney.

S. LETA, R. Br., var. GLABRA, var. nov. I am in doubt about the specimens placed here under a new variety, but I prefer this to proposing a new species. The flowers are red, the sepals acute, and the leaves narrow-lanceolate, — characters not included under Bentham's description of the species; Camboon; October.

ASTROLOMA HUMIFUSUM, Pers. "Groundberry." Everywhere; apparently in flower and fruit all the year round. At Murrumbo it is quite an erect shrub; from 1-2 feet high.

MELICHRUS URCEOLATUS, R. Br. The specimens found on the western slope at Rylstone and Mt. Vincent correspond to A. Cunningham's *M. medius*; while those on the eastern slope at Murrumbo to his *M. erubescens*. I think they are good species, but as Bentham has placed them under *M. urceolatus*, R.Br., I have followed his classification. September; in fruit in November and December.

BRACHYLOMA DAPHNOIDES, Benth. Only seen at Murrumbo, but no doubt common.

LISSANTHE STRIGOSA, R. Br. Murrumbo; September and October.

LEUCOPOGON LANCEOLATUS, R. Br. Kelgoola; September.

L. MICROPHYLLUS, R. Br. Kelgoola; September.

L. VIRGATUS, R. Br. Camboon; October.

L. MUTICUS, R. Br. Camboon, Bylong Ranges; flowers and fruit in November.

L. ESQUAMATUS, R. Br. Very common on sandstone ridges; September and October.

EPACRIS RECLINATA, A. Cunn. Kelgoola, Camboon and Talooby; October. This is its most northern limit.

E. PULCHELLA, Cav. Only found on one patch of sandstone at Kelgoola.

DRACOPHYLLUM SECUNDUM, R. Br. Bentham notes under this species (B. Fl. iv. 263) "the filaments are represented in the Bot. Mag. [t. 3264] as free; I have always found them adnate to the corolla-tube." In the specimens collected at Kelgoola the anthers were free.

JASMINEÆ.

NOTELEA MICROCARPA, R. Br. On the summit of the Dividing Range at Mt. Vincent, near Ilford; November. This is the most southerly locality for it yet recorded.

APOCYNÆ.

LYONSIA EUCALYPTIFOLIA, F.v.M. Bylong; the most easterly locality in this colony yet recorded for it.

ASCLEPIADEÆ.

MARSDENIA SUAVEOLENS, R. Br. Murrumbo.

LOGANIACEÆ.

LOGANIA FLORIBUNDA, R. Br. Common throughout the district. It is of a lighter green than the coast variety, and also does not dry so black; September.

GENTIANEÆ.

SEBÆA OVATA, R. Br. Camboon; October.

ERYTHRÆA AUSTRALIS, R. Br. Camboon; October.

BORAGINEÆ.

MYOSOTIS AUSTRALIS, R. Br. Only on the western slope of Dividing Range at Rylstone; December.

CYNOGLOSSUM AUSTRALE, R. Br. "A tall, erect coarsely-hirsute plant." Murrumbo; October.

SOLANEÆ.

SOLANUM STELLIGERUM, Sm.

S. VIOLACEUM, R. Br. On the eastern slope of the Dividing Range from top of the Gulf to Murrumbo; in flower and fruit in October and November. It differs from the ordinary *S. violaceum* in having broader calyx-lobes.

S. VIOLACEUM, R. Br., var. VARIEGATA, var. nov. I found this specimen growing between the bark and sapwood of *Angophora intermedia* on the Gulf Road. The white markings gave it a very attractive appearance, and when first approaching it I thought I had got something new. I propose to call it a variegated form of *S. violaceum*.

S. AMBYMERUM, Dun. Taloooby; October. Bentham suggests that this may prove to be a variety of *S. violaceum*, but after comparing specimens of both I think they are distinct species.

S. CAMPANULATUM, R. Br. Murrumbo Ranges; October (flowers and fruits).

S. CINEREUM, R. Br. Murrumbo; October; rare.

SCROPHULARINEÆ.

GRATIOLA PERUVIANA, Linn. "Brooklime." In creeks at Mount Vincent, and Kelgoola.

EUPHRASIA BROWNII, F.V. M. Throughout the district on damp ground; September.

MYOPORINEÆ.

MYOPORUM ACUMINATUM, R. Br., var. ANGUSTIFOLIUM, Benth.
Rylstone and at the foot of the Bylong Ranges. In
flower in September, and in fruit in November.

M. DESERTI, A. Cunn. Rylstone and Murrumbo. I do not
think it has been recorded further east than these two
localities. Bentham (B. Fl. v. p. 5) in his description
of this species gives the number of stamens as five,
whilst I found only four in my specimens; September
and October (flowers and fruits).

M. PLATYCARPUM, R. Br. Murrumbo; October. This species
has previously been recorded only from the dry interior,
i.e., Murray and Darling Rivers.

EREMOPHILA LONGIFOLIA, F.v.M. On the western slopes of the
Ranges to the east of Bylong Creek. This is the most
easterly locality yet recorded; September.

LABIATÆ.

SCUTELLARIA MOLLIS, R. Br. Camboon. This is its most northern
locality recorded; October.

PROSTANTHERA PRUNELLOIDES, R. Br. Murrumbo Ranges;
October. A beautiful shrub, the profusion of large
white flowers making it most attractive.

P. DEALBATA, R.T.B. At the foot of Cox's Gap, Murrumbo
side; September.

P. STRICTA, R.T.B. Mount Vincent, near Ilford; November.

P. EMPETRIFOLIA, Sieb. Murrumbo; October.

WESTRINGIA LONGIFOLIA, R. Br. Murrumbo; October and
November.

TEUCRIUM CORYMBOSUM, R. Br., var. MICROPHYLLUM, var.nov.
Murrumbo; October.

AJUGA AUSTRALIS, R. Br. This species grows very luxuriantly at Bylong, reaching sometimes 3 feet in height. A pink form was found at Murrumbo.

Sub-class III. MONOCHLAMYDEÆ.

MONIMIACEÆ.

DORYPHORA SASSAFRAS, Endl. In the sassafras gullies at the source of the Cudgegong River.

LAURINEÆ.

CASSYTHA PUBESCENS, R. Br. Camboon; October (flowers and fruits).

C. MELANTHA, R. Br. Murrumbo; October (flowers and fruits).

PROTEACEÆ.

PETROPHILA PULCHELLA, R. Br. On sandstone country; September (fruits).

IISOPOGON PETIOLARIS, A. Cunn. Bylong Ranges; October.

I. *DAWSONI*, R.T.B. Murrumbo, on the summit of the Ranges on the north of the Murrumbo Plains. The original specimen upon which this species was founded was not a true representative. A second visit to this locality revealed a much larger shrub than formerly described. It is at least 20 feet high, in fact the tallest of *Isopogons* in Eastern Australia. The flowers are also very showy and attractive, and as it flowers freely it presents quite a picture, and is well worthy of cultivation; September.

CONOSPERMUM TAXIFOLIUM, Sm., var. *LANCEOLATUM*, R. Br. Bylong and Murrumbo; October and November. This variety was collected on the Hunter River by Robert Brown.

PERSOONIA CIAMLEPITYS, A. Cunn. At the top of the Gulf Road, on the loose sandy flat; October.

P. LINEARIS, Andr. The most common of all *Persoonias*, on worthless sandy ground and rocks; September (fruits).

P. RIGIDA, R. Br. Near the Goulburn River, Murrumbo.

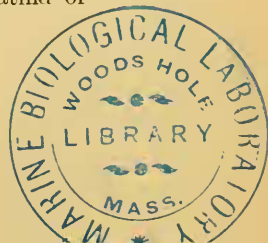
P. CURVIFOLIA, R. Br. Only found on the western watershed, *i.e.*, at Camboon. This is therefore its most easterly habitat yet recorded; October (fruits).

P. ? OBLONGATA, A. Cunn. Not common; on sandstone country at Kelgoola.

P. ? CUNNINGHAMII, R. Br. I have placed my specimens provisionally under this species as I was only able to obtain them in fruit. It differs from Bentham's description of *P. Cunninghamii* in having reflexed hairs on the branches, pedicels *not* glabrous nor slender, and a pubescent ovary, veins of leaf fairly prominent; Bylong Ranges.

GREVILLEA MUCRONULATA, R. Br. A small shrub occurring only at Murrumbo, and having "leaves rounded at the ends and shortly mucronate." This was the form found by A. Cunningham on the Hunter River (B. Fl. v. p. 443), and is made the type of the species by Bentham (*loc. cit.*); September and October.

G. LONGISTYLA, Hook. On the Ranges on the north side of Murrumbo Plains. The specimens obtained are referred to this species on the authority of Baron F. v. Mueller, who, in giving his reasons, says that Bentham's description of this species is incorrect as regards the length of pedicel, style, &c. My specimens differ from those described by Bentham in the length of the pedicels, which are under 6 lines, whereas Bentham gives 2-4 inches; the leaves are all under 1 line in width, whereas Bentham gives 2 lines; they are linear, pinnatifid or



divided into long linear segments. It is a very showy shrub and worthy of cultivation, its large beautiful crimson flowers and long linear leaves having a very pleasing effect. It is considered the prettiest shrub in the bush at Murrumbo, where it was first found in this Colony by Mr. J. Dawson, of Rylstone.

G. PUNICEA, R. Br. Kelgoola.

G. SERICEA, R. Br. Murrumbo; September and October.

G. TRITERNATA, R. Br. On the road to Macdonald's Flat, Murrumbo; September and October (flowers and fruits).

G. RAMOSISSIMA, Meissn. Camboon and Rylstone; October.

HAKEA MICROCARPA, R. Br. Throughout the district both in grassland and sandy flats; October to December (flowers and fruits).

H. DACTYLOIDES, Cav. On the eastern slope of the Dividing Range, at the top of the Gulf, Cox's Gap and Murrumbo; October.

LOMATIA ILICIFOLIA, R. Br. Fairly common on sandstone ridges at Kelgoola.

L. LONGIFOLIA, R. Br. Kelgoola; September (fruits).

BANKSIA MARGINATA, Cav. A fair-sized tree at Mount Vincent, near Ilford; also occurs at Kelgoola.

B. SERRATA, Linn. f. var. HIRSUTA, var. nov. Only one clump of this species seen, and that on one of the ranges at Kelgoola. The leaves are larger than those of Sydney specimens, and covered on both sides with long white hairs, which are also found on the branches. This species has never been recorded so far west before.

THYMELEÆ.

PIMELEA GLAUCA, R. Br. Talooby. Specimens differ from the type in having the persistent portion of the perianth glabrous; October.

P. COLLINA, R. Br. Camboon. The specimens are evidently the *P. Cunninghamii* of Meissn., which Bentham doubtfully places as a variety of *P. collina* (B. Fl. vi. 17); October.

P. LINIFOLIA, Sm. Everywhere; October to December.

P. CURVIFLORA, R. Br. A small delicate plant a few inches high. In flower at Murrumbo in October.

P. HIRSUTA, Meissn. A variety of this species with crowded, oval-shaped leaves was found at Murrumbo; October. This is the most northern locality recorded for it.

EUPHORBIACEÆ.

PORANTHERA CORYMBOSA, Brongn. Top of Gulf Road and Murrumbo; September to November.

P. MICROPHYLLA, Brongn. Camboon; October.

BEYERIA VISCOSA, Miq. Murrumbo, on the banks of the Goulburn River; October (fruits).

BERTYA GUMMIFERA, Planch. Banks of Goulburn River, Murrumbo; September.

AMPEREA SPARTIOIDES, Brongn. Mount Vincent, near Ilford. Male plants.

URTICACEÆ.

FICUS SCABRA, Forst. Murrumbo; rare.

F. (STIPULATA) PUMILA, L. On the left hand side of the Gulf Road.

CASUARINEÆ.

CASUARINA STRICTA, Ait. This species occurs at Murrumbo, on the north-western slope of one of the ranges bounding the southern side of the Murrumbo Plains, and also on the side and summit of Bald Hill, Camboon. These are the most northern localities recorded for this species, Mt. Dromedary in the south being the previous northern limit. It is mostly a swamp species; height 30 to 40 feet; in fruit in November and December.

- C. SUBEROSA, Ott. et Dietr. The only species of sheoak seen at Kelgoola, not very common.
- C. DISTYLA, Vent. On the hills on the left bank of Bylong Creek at Taloo by, and Murrumbo. A shrub of about 10 feet high. In flower and fruit in October and November. This is the most northern locality recorded for this species. It differs from the coast form in having slender branches and much more elongated fruits.

SANTALACEÆ.

- CHORETRUM SPICATUM, F.V.M. Camboon (western watershed); October. If this is a correct diagnosis this brings the range of the species very much further east than previously recorded.
- C. LATERIFLORUM, R. Br. Kelgoola; September.
- C. CANDOLLEI, F.V.M. Murrumbo; September (flowers), October (fruits).
- OMPHACOMERIA ACERBA, A.DC. Mount Vincent, near Ilford.
- EXOCARPUS CUPRESSIFORMIS, Labill. "Native Cherry." Barrigan Ranges.
- E. STRICTA, R. Br. Goulburn River; September.

Sub-class IV. GYMNOSPERMÆ.

CONIFERÆ.

- CALLITRIS CALCARATA, R. Br. "Black Pine." Taloo by and Bylong.
- C. COLUMELLARIS, F.V.M. "White Pine." Bylong.

CYCADEÆ.

- MACROZAMIA SPIRALIS, Lehm. On the foot and brow of most of the hills at Bylong; in fruit in September.

Class II. **MONOCOTYLEDONS.**

ORCHIDÆ.

- DENDROBIUM TERETIFOLIUM, R. Br. Kelgoola.
- CYMBIDIUM SUAVE, R. Br. Mostly in the forks of dead standing timber ("Box," "White Box," and "Apple Tree") at Bylong and Taloooy.
- DIURIS AUREA, Sm. Murrumbo; September.
- D. SULPHUREA, R. Br. Taloooy; September.
- CALADENIA CARNEA, R. Br. Barrigan Ranges; September.

IRIDÆ.

- PATERSONIA SERICEA, R. Br. Murrumbo; October and September.

LILIACÆ.

- GEITONOPLESIMUM CYMOSUM, A. Cunn. Rylstone; September (fruits).
- BULBINE BULBOSA, Haw. Common throughout the district; September to November.
- ANGUILLARIA DIOICA, R. Br. Common; October.

JUNCACÆ.

- XEROTES LONGIFOLIA, R. Br. Barrigan Ranges and Kelgoola.
- X. MULTIFLORA, R. Br. Camboon.
- X. FILIFORMIS, R. Br. Bylong and Camboon.
- XANTHORRHEA HASTILIS, R. Br. Rare; found only on the sandy flats towards Goulburn River, Murrumbo; September.

CYPERACÆ.

- SCHENUS ERICETORUM, R. Br. Murrumbo; September.
- GAHNIA ASPERA, Spreng. Murrumbo; September.
- G. PSITTACORUM, Labill., var. (?) OXYLEPIS, Benth. Kelgool

CAUSTIS FLEXUOSA, R. Br. Kelgoola.

CAREX PANICULATA, Linn. Talooby; October.

GRAMINEÆ.

ANTHISTIRIA CILIATA, Linn. fil. Murrumbo; not common.

DANTHONIA SEMIANNULARIS, R. Br. Throughout the district.

STIPA SETACEA, R. Br. Rylstone.

* KOELERIA PHLEOIDES, Pers. Murrumbo.

* FESTUCA RIGIDA, Mert. and Koch. Murrumbo.

* CERATOCHELOA UNIOLOIDES, DC.† This American grass was found at Murrumbo.

Class III. ACOTYLEDONS.

LYCOPODIACEÆ.

AZOLLA RUBRA, R. Br. Very plentiful on Budden Creek. During the drought of 1895 it was the only green feed available for cattle, which seem to eat it with great relish.

FILICES.

TODEA BARBARA, T. Moore. Rare; only found at Camboon, which locality would probably be its western limit; in fructification in October.

ADIANTUM AETHIOPICUM, Linn. Barrigan Ranges.

A. FORMOSUM, R. Br. Barrigan Ranges.

PTERIS AQUILINA, L. Mount Vincent, near Ilford.

POLYPODIUM SERPENS, Forst. Found in dense masses on the surfaces of rocks in the gullies.

NOTHOLENA DISTANS, R. Br. Found on the eastern and western watersheds at Camboon and Murrumbo respectively.

* Introduced.